

# SOIL MOISTURE SAMPLING

You will return to the contents of P1 SOIL by clicking the pictogram



## Samplers with glass / plastic cup

Soil water studies are conducted to examine the concentrations of soil water compounds, e.g. plant nutrients, or pollutants, and their flux downwards to the groundwater. Until the 1990s almost all those studies were made with ceramic suction cups. Unfortunately the ceramic material affects the concentration of many solutes due to adsorption processes, so it is not suitable for these compounds of the soil solution. The glass and plastic suction cups and plates were specially developed to solve these problems. If preferential flow occurs, suction plates give a more realistic signal of water fluxes in soils as they get water out of larger areas than suction cups. Suitability of suction cup/plate materials for the examination of different solutes in soils are as follows:

- Pesticides, DOC: use glass
- Phosphate: use glass or plastics
- Nitrate, chloride, bromide, sulfate, sodium: all are suitable
- Heavy metals: use plastics

## 12.52 Soil water sampler set with conical porous glass suction cup.

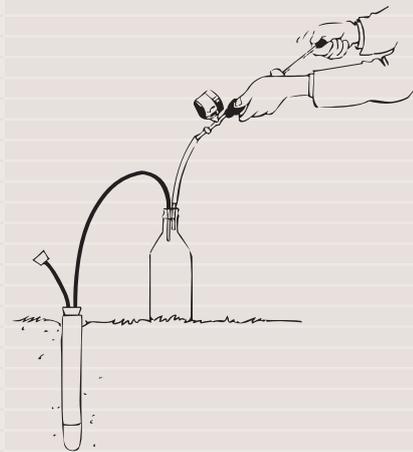
The suction cups of these samplers are developed especially for the examination of organic solutions in soil. The borosilicate porous part has an extreme low sorption of agricultural control chemicals, total carbon, phosphate and PAH's. The standard set comprises: 3 samplers with diameter 22/16 mm, length 30, 60 and 90 cm, sample bottles with silicon stoppers, vacuum pump and soil insertion auger set.

## 12.53 Soil water sampler set with porous plastic suction cup.

This plastic suction cup was developed for the examination of anorganic solutes in soil, especially for those with high sorption coefficients like heavy metals and phosphate. Its porous part is a sandwich construction consisting of a nylon membrane filter and a porous polyethylene substructure. The set consists of: 3 samplers, diameter 20 mm, length 30, 60 and 90 cm, sample bottles with silicon stoppers, vacuum pump and soil insertion auger set.

P1.65

Collecting soil water using the vacuum pump.



Soil water samplers with glass and plastic porous cup

## BENEFITS

### 12.52 Soil water sampler glass cup

- Only good choice for agrochemicals analyses
- Will correctly sample phosphates and TOC
- Installation as other samplers

## BENEFITS

### 12.53 Soil water sampler plastic cup

- Perfect for research on (trace) metals
- Perfect for  $\text{NO}_3^{2-}$ ,  $\text{SO}_4^{2-}$ , Br, Cl, Na<sup>+</sup>



www.eijkelkamp.com